PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MAY 13, 1876.

ORIGINAL COMMUNICATIONS.

CANCER OF THE PERITONEUM.

BY JAMES H. HUTCHINSON, M.D.,

Read before the Pathological Society, January 27, 1876, from notes by Dr. Morris J. Lewis.

M. G., æt. 56; married; housekeeper; German; admitted into Pennsylvania Hospital October 21, 1875. Patient's father died of consumption, and her mother of some acute chest-trouble. When young, patient enjoyed good health, and menstruated regularly. She has had two children, the last one being born twenty-six years ago; after this she enjoyed moderate health, with the exception of an occasional feeling of uneasiness in the pelvic region, until the arrival of her menopause, when she was forty-three years old. Her last menstrual flow was very profuse, and continued for nine weeks; after this the discharge gradually became purulent, and remained so, subject, however, to slight exacerbations, until her admission. For the succeeding thirteen years the most prominent symptoms were purulent discharge from the vagina, pain in the right inguinal region after any marked exertion, and a general feeling of malaise. In June, 1875, she first noticed enlargement of her abdomen, and in three months she was tapped, and a large amount of fluid was drawn off, which was somewhat tinged with blood; the fluid rapidly reaccumulated, and before her admission into the hospital she was tapped twice more, the last time the fluid being of a much darker color.

On admission, the patient is weak and emaciated, her appetite is poor, and her bowels constipated. There is marked globular enlargement of the abdomen, with but little bulging in the flanks. The umbilicus is but moderately prominent, and is much nearer the ensiform cartilage than the pubes. The surface of the abdomen is traversed by enlarged veins. There is marked fluctuation. Dulness exists in median line above pubes, and in the left flank much more than in the right. Change of position does not influence the lines of dulness to any marked degree. Indurated masses, quite tender upon pressure, can be felt in both inguinal regions, but particularly in the right, from which point they can be traced as far as the median line. Vaginal examination reveals indurated masses on both sides of the uterus, and apparently connected with it, as that organ is not freely movable, but seems bound down. The largest mass exists upon the right side, and seems continuous with the mass felt in right inguinal region. The os uteri is apparently normal, and there is no ulceration of the vagina.

The second sound of heart at right base is slightly booming, but no positive murmur can be heard. There is slight atheroma of the radials. Urine pale, slightly acid, faintly phosphatic; sp. gr. 1019; no albumen.

Iron, in tonic doses, ordered.

November 20.—Asks for her discharge.

December 2.—Re-admitted. The abdomen has increased greatly in size, measuring forty-two inches in circumference; the right side bulges considerably more than the left, and there is dulness around umbilicus extending towards the right. Beneath the arch of the ribs upon the left side, a hard nodular mass, which is very tender upon pressure, can be detected. The masses in the inguinal regions seem larger, but are obscured by the effusion. Considerable œdema of the lungs exists, with consequent dyspnœa.

December 3.—Tapped, and Oxxiv of a thick, slightly gelatinous, bloody fluid were drawn off. After the tapping the hard masses can be very distinctly felt to have increased in size.

December 27.—Reaccumulation; tapped again, and Oxxiiiss of fluid were drawn off.

December 30.—Impaired resonance, feeble heart-sounds, and subcrepitant râles exist over left base posteriorly. There is dry cough, and patient is very weak. Ordered brandy, f℥iij, and

℞ Syr. senegæ,
Syr. tolutan., āā f℥ss;
Amm. mur., gr. x;
Aquæ, q. s. ad f℥ss.

Four times a day.

January 3.—Dulness now exists in right flank, and tympany in left; this is not influenced by change of position. The dose of the prescription ordered on December 30 reduced to f℥ij.

January 18.—Fluid shifts more than formerly, but the percussion-note still continues dullest in the right flank.

Tapped again, and Oxv of fluid drawn off. Soon after this, patient began to suffer from violent pain in the course of the sciatic nerves, necessitating large doses of morphia.

January 19.—Violent pain in right side. Slight fever.

January 20.—Died, but shortly before this event took place her right arm and both her legs became congested and œdematous, the left pupil became contracted and the right dilated, and both eyes were drawn strongly upward and towards the left.

Autopsy (by Dr. Longstreth), fourteen and a half hours after death. Slight rigor mortis.

Thorax.—The *pericardium* contained a small amount of clear serum; there was no evidence of inflammation. Both the parietal and visceral surfaces were normal.

The *heart* was covered with a slight amount of fat, and its tissue was flabby. The cavities contained firm clot (not fibrinous), which extended into the great vessels at the base. The valves, especially the mitral, seemed thicker than normal; their surfaces were smooth, but showed atheromatous changes. The aortic leaflets were also slightly thickened and whitish, but less so than the mitral. Otherwise the heart was normal.

Pleura.—There were a few slight old adhesions, but no fluid. One or two small masses (similar to diseased conditions found elsewhere) were found in the tissue of the anterior mediastinum, and also on the pleural surface next to the right side of the pericardial sac. On the upper surface of the diaphragm were found small patches of a similar nature.

Lungs.—There was puckering at apex of left lung, but on section through this point there appeared nothing abnormal in the subjacent pulmonary tissue. On the posterior aspect of the upper lobe of the right lung there were seen minute white specks beneath the pleura, with no roughening of its surface; these were not found at any other part. On section of the lung-tissue it exuded abundant bloody frothy fluid; the tissue was crepitant throughout, and congested posteriorly. It appeared otherwise normal everywhere. The *glands at root of lung* were enlarged and rather conspicuous, softened, and dough-like, and, after section, pressure caused them to break down and to pour out their whitish-colored interior.

Abdomen.—*Liver* was small, and weighed three pounds three and a half ounces. Its outline was irregular and its tissue softened, but on section there was found no evidence of local diseased condition (no malignant deposit).

The *gall-bladder* was full of greenish-yellow bile.

The *stomach* was irregular in its outline and not distended; its walls appeared normal. Behind it was a large mass of glands about the size of the closed fist; these were slightly attached to both liver and stomach, and bound these organs together by long bands of loose fibrous tissue.

The *spleen* had its capsule thickened and puckered, and it was surrounded, especially at the lower part, by inflammatory adhesions. On section at the upper middle portion, it was firm and irregularly streaked red and white (embolism); the lower segment of the organ was normal.

The *pancreas* was very much reduced in size, and its tissue very firm; this organ and the vessels in the gastro-splenic omentum were surrounded and apparently pressed upon by the enlarged glands.

The *supra-renal capsules* were of normal appearance; the right one was pretty firmly adherent to the tissue around capsule of kidney.

Right kidney.—The capsule was tightly adherent, as well as the perinephritic connections. After removal of the capsule, the surface presented a granular appearance and a few minute cysts. On section, the relation of cortex to medullary portion was about normal. The cortex appeared markedly streaked. At the upper portion of the organ there was irregular mottling, very red and white; the upper middle portion showed an area of a distinctly white color in comparison with the surrounding tissue. The pyramids connected with these areas were uniformly of a deep-red color, and the arteries passing to the upper portion of the organ were filled with firm clots, fibrinous, though not white (blood-stained), which were not adherent to the coats of vessels (recent embolism).

Left kidney.—The perinephritic connections were very firm, and the capsule was very tightly adherent and thickened; on removal it left a comparatively smooth surface, which was finely mottled, and showed stellate veins very distinctly. On section, the relation of the cortex to the medullary portion seemed normal. There was no

positive evidence of embolism, although portions of the cortex showed the same mottled appearance (large area and coarse mottling) as the other organ where actual emboli were found. Its pelvis was slightly dilated, and contained a little thick urine.

The left ureter was more markedly surrounded and pressed upon by the tumor in the pelvis than the right one. Weight of both kidneys, nine and one-half ounces.

In the *pelvis* was found a large mass which completely filled it, rising above the superior strait, and spreading over into the right iliac fossa; it extended somewhat over into the left fossa, but less. The large intestine passed down behind it nearly in the median line. The principal part of the tumor in the pelvis was a rounded mass made up of cysts, while the part that presented upwards was covered by a cauliflower growth, having a lobulated, uneven surface, colored variously from red to white. There was no evidence that hemorrhage had taken place from this, but from the color of the abdominal fluid (blood-stained serum) gradual oozing was indicated.

The *omentum* was attached to about the summit of this mass, and nearly the whole of its layer was dragged upward and to the left side, where it was bound down by adhesion in the neighborhood of the spleen. There were several large masses in it of similar nature to that in the pelvis.

The *bladder* was tightly adherent to the anterior face of the tumor; its neck was elongated; it did not appear to be dilated; its walls and mucous membrane were normal.

The *uterus* was found to the left of the pelvic mass; it was retroverted and the body still further flexed upon the cervical portion; it was firmly fixed in this position, having been pushed over to the left pelvic wall; the uterus was in contact almost with the walls of the tumor upon the right, but it was not involved in the diseased change. Its walls were congested but not thickened.

The *Fallopian tubes* could not be found; the tumor from its position seemed to have grown from the right *ovary*. The left ovary could not be found. There were numerous growths upon the *abdominal wall*, both where the peritoneum came in contact with the growth, and also where no such contact could have existed. These growths presented the same appearances as the upper surface of the growth in the pelvis and in the omentum; they varied in size from a split pea to a chestnut. On the anterior abdominal wall, commencing about where there was contact and adhesion between it and the mass in the upper part of the omentum, near the spleen, was found a white cord covered with peritoneum, running downwards, towards line of Poupart's ligament. It branched numerously (four or five bifurcations with smaller branches), and situated on these branches were several of the growths; the largest of them described as appearing on the surface of the peritoneum. No examination of the head was permitted.

The specimen was referred to the Committee on Morbid Growths, which reported, February 10, 1876, as follows:

"Your committee find that the specimen of abdominal tumor presented by Dr. James H. Hutchinson is composed of numerous cysts containing fluid, and of a solid portion, which, under the microscope, exhibits the oval, rounded, caudate, fusiform, and multiangular cells, with large nuclei, arranged in an ill-defined, wide-meshed stroma, characteristic of encephaloid carcinoma.

"The dichotomous cord-like body, to which the attention of the committee was also directed, seems to be composed of organized fibrin, with a band of yellow elastic tissue upon one side of it, but presents on transverse section no vestige of central lumen, nor of an auricular arrangement of its constituent structures, such as would indicate a former vascular nature."

[NOTE.—The patient presented just before her death symptoms indicating the existence of cerebral embolism, but, unfortunately, as permission to examine the head was denied us, this was not positively ascertained.]

THE OPHTHALMOSCOPE IN CEREBRAL TUMORS.

BY A. DOUGLASS HALL, M.D.,

Read before the Philadelphia County Medical Society, January 26, 1876.

ON the 10th of October, 1875, I was asked to see E. D., aged 30, who was said to be entirely blind. I found him lying in bed, recovering from the fatigue of a through journey from Omaha, Nebraska. He was of medium height, spare but sinewy, nervous build, of considerable force of character, amiable temperament, correct habits, using

tobacco very moderately, eschewing alcohol, apparently, when in health, capable of much endurance. His irides were bluish-gray, his hair was of a light-brown color. He was married, and had two healthy children. I learned that in February, 1874, was his earliest period of complaint; at that time he had a nasal catarrh, accompanied by violent headaches and vomiting. These would last for a few days and then pass away. Six weeks later he had a repetition of violent headache and vomiting. He would keep his bed during these attacks, and then after they had passed off he would get up and seem well. In November, 1874, he was very ill with the headache and vomiting, and his wife was alarmed at his condition. After this attack he did not seem to recover as usual, but continued ailing, and from time to time had spells of headache and "confusion in his brain." He could not walk so fast, and seemed to be gradually failing. At this time he remarked to his wife that "he must take care of himself that winter," and did not want to go out at night to lectures or places of amusement. He evinced a desire to retire early, and was evidently annoyed when company or other causes kept him out of bed. At the same time he felt the cold unusually, requiring twice as many bedclothes as the rest of the family, and often asked for warm-water bottles in his bed. In the daytime he also required extra clothing. In November, 1874, he first began to complain of his sight. He had "spells of blindness." He could still read a newspaper, but so slowly that it was no satisfaction to him, and his devoted wife was in the habit of reading the news of the day to him. In March, 1875, he wrote to his father in Philadelphia that while attending to his business in the streets of Omaha (as the city surveyor) he would often stagger so much as to be obliged to steady himself by the nearest lamp-post, just as a drunken man would, and he feared that his fellow-citizens might attribute his unsteadiness to the same cause. Prior to the chain of symptoms detailed he had always been a very active man, but now he appeared languid, and complained that he could not run to catch a train as he formerly did.

At intervals he had much difficulty in adding up columns of figures or making calculations for estimates, such as his business as a civil engineer often required him to do. To such an extent had he been harassed by this hindrance, that he told his wife that he had frequently been obliged to frame some excuse for not performing such mental processes upon the spot in his office, feeling himself forced in self-defence into making a future appointment for the purpose.

In the spring of 1875 he had headache and vomiting for a day or two at a time. The seat of pain, when localized at all, was over the eyes, or forehead. During the early summer he complained of pain in the calves of his legs, the small of his back, and the end of the spine. He also at one time had constant, severe pain in the stomach for three weeks, which seemed to be independent of the presence of food in that viscus, and disappeared independently of remedies. He had giddiness on stooping or rising up from a stooping position. He never had syphilis. His father was a hale farmer, and his mother died of phthisis three months after he was born. His grandfather died aged one hundred years and six months. There was no paralysis of motion or sensation of either the trunk or of the upper and lower limbs. There was a very moderate dilatation of both pupils, and slight divergence of both eyes. He had no perception of light. There was complete paralysis of the left orbicularis palpebrarum, followed by a passive congestion of the bulbar conjunctiva, and later still by transparent ulcer of the cornea about $1\frac{1}{2}'''$ in length, situated at the lower border of the left cornea, about $1'''$ from the limbus conjunctivæ. The cornea was partially anæsthetic. With some difficulty, owing to his weak condition, an ophthalmoscopic examination was made. Both nerves were swollen, of a dirty-gray color; the veins were enlarged, tortuous, and the engorgement appeared to be continued to the farthest periphery of the retina visible. The arteries were seen as normal by the direct image. Glass 16 for the right eye showed a projection of the disk of 0.85 mm., while the left eye gave a projection of its disk of 0.65 mm. In conversation his mental faculties appeared intact, but a certain slowness of action was evident. His head was not hot, nor on this occasion did he have headache. His pulse was 96, small and quick, the axillary temperature 98°; urine normal, no albumen, no casts; specific gravity 1015. He was quite deaf in the right ear, a watch not being heard upon contact; this was not owing to any coarse disease of the drum or middle ear and appendages. His sense of smell was affected, but not that of taste. At this time, although weak upon his feet when helped out of bed, he had no sensation of falling.

The temperature, as noted above, averaged 98°; on only one occasion was it observed to be 100°. He has had from time to time vomiting of a thin, greenish character, apparently perfectly independent of the vacuity or repletion of the stomach. His headaches have not been unbearable since his sojourn East, although in Omaha he was in the habit of saying that he must die if they continued in severity. His intellect at times became excessively dull, so that he could not recall my name, although knowing that I was "the doctor." Early in December he was removed from the city to a brother's home near Media, Delaware County, Penna., where on the last day of that month I saw him with Dr. Francis Rowland, of Media. He looked better in the

face than he had done in town, probably owing to the fine milk in the country, but his body and limbs were miserably emaciated.

At this time his condition was described as follows. His head is drawn to the left as he lies in bed, and on attempting to straighten it there is muscular resistance, and the effort apparently causes pain, or at least uneasiness. That the mouth in speaking and drinking is drawn to the right side is more evident than before; the tongue, when protruded, is also inclined to the right. The conjunctival injection of the left eye is less, the transparent ulcer has not increased, but there is a patch of superficial excoriation above, covering nearly the whole of the pupil, and preventing a view of the fundus of that eye. In the outer and lower quadrant of this cornea there is a cloudy swelling, the probable forerunner of coming ulceration. The pulse is 96, small and weak; the temperature 98° under the tongue; 24 respirations in the minute. He still has the awkward manner of hawking up mucus noticed before, but it does not seem to be so frequent, and he seems to swallow better. His wife thinks that he is more rational than he has been for the last three weeks. I think that at this visit he had a correct idea as to who I was, but he could not pronounce my name. From constant pressure a bed-sore four by six inches in size was forming upon the right nates. At this stage of the case I had made my diagnosis, and had committed it to paper. I shall allow my ante- and post-mortem opinion to stand side by side without alteration, recognizing the truth of the old saying that we learn more from our errors than from our successes. To go on, then, with the statement; in this case the diagnosis was made of a tumor of the brain, and it was located under the tentorium. This conclusion was arrived at from the character of the paralysis of special nerves. It was assumed that the portio dura of the seventh was affected by destructive pressure at its origin or in its course, as evidenced by the complete paralysis of the orbicularis palpebrarum of the left side. The divergent strabismus and dilated pupil pointed to pressure on the third nerve. The deafness of the right ear in the absence of any coarse changes in the parts open to touch or inspection, was referred to the auditory nerve or portio mollis of the seventh pair, which takes its origin essentially from the floor of the fourth ventricle. The congestive ulceration of the left cornea showed the affection of the ophthalmic or first branch of the fifth nerve, while that the glossopharyngeal and the motor branches of the pneumogastric of a similar anatomical distribution were interfered with was probable from the effort in swallowing, and from the collection of mucus in the throat, to account for which there was no evidence of any catarrhal or other process going on within the chest, and the fact of the steady normal temperature to negative a tubercular origin. Basilar meningitis, cerebral softening, or abscess alone could produce similar symptoms. I need not recite the symptoms differentiating the above processes from that of tumor, but suffice it to say that none of the above were agreeable to such a supposed causation. Neither pulmonary, cardiac, nor renal disease existed. The head-symptoms were not those of sudden pressure, but were rather those of slowly-applied compression, such as would occur in the sluggish growth of a tumor. For these reasons it was thought fit to diagnose the disease as one of tumor of the cerebellum, even without taking into account the important symptom of double optic neuritis, although this would be petitio principii, begging the whole question, for the discovery of this symptom with or without vision should at once put the observer upon the track of the disease. Of course, until brought to an actual post-mortem, the presence of a tumor could not be mathematically demonstrated; but from a résumé of the above symptoms it seemed not an unfair or illogical deduction.

The patient remained in the same state until Sunday, January 9, 1876, when he had a severe chill, followed by hot skin and fever. The next morning he ate an egg and some toast for his breakfast with apparent relish. He seemed much better, and lay for a long while holding his wife's hand in his; but towards noon dyspnœa set in; he appeared to be in much suffering, and died at three o'clock on the 10th of January, retaining his consciousness until the close of life.

The post-mortem was made forty-eight hours after death. Face much aged for thirty years. Rigidity well pronounced. Great emaciation. Calvarium being removed, the membranes were found greatly engorged. As the brain was removed in its membranes, serum flowed copiously when the medulla was cut across.

Both middle lobes seemed softened, the left more than the right. An abnormal pultaceous deposit of a pinkish color was seen over the optic chiasm. A softened growth filled in the space between the crura and the chiasm. The pia mater had a pinkish appearance. Small pearl-shaped masses of lymph were on the pia mater at the base. The right lateral ventricle was full of serum, its choroid plexus much congested. The posterior half of the left hemisphere contained softened matter of a greenish-yellow color, portions of it of the consistence and resembling cheese-cake. The mass was surrounded by hemorrhagic infarction. The entire interior of the left ventricle was covered by a pinkish-gray pultaceous mass, and was distended with straw-colored serum. The contrast between the healthy right lobe and the left at this point of the examination was very marked. The choroid plexus of the right ventricle was filled with aneurismal dilatations. The left wall of

the fifth ventricle was involved in the same disease as the left. The fornix of the left side was destroyed; that of the right side was adherent to the optic thalamus by lymph. The right ventricle was normal, except the adhesion mentioned. The left optic thalamus was softened. The third and fourth ventricles also contained the same disease as referred to above. The nates and corpora quadrigemina seemed normal. Hard tubercular deposits were found at the apices of both lungs. Pericardium and heart normal.

The examination was made with great skill and accuracy by Dr. William H. Winslow, of Philadelphia, assisted by Dr. Francis Rowland, of Media.

Dr. Joseph G. Richardson, to whom specimens were submitted, makes the following report:

"Thin sections of the 'pinkish-gray pultaceous mass' lining the left and other ventricles showed it to be made up of oval, rounded, angular, caudate, and fusiform cells (somewhat resembling those of the choroid plexus) from one two-thousandth to one six-hundredth of an inch in diameter, furnished with large irregularly-shaped nuclei, generally single, but sometimes two, three, or more in number. These cells were held together by a rich vascular plexus and by delicate interlacing filaments of connective tissue, which did not constitute an intercellular stroma of the sarcomatous type. The mass of similar material attached to and apparently compressing the chiasm of the optic nerves had the same histological structure. Little or no evidence of neuritis was discoverable in adjacent portions of the optic nerve tissue.

"The softened matter of a greenish-yellow color in the left hemisphere was composed of a congeries of obsolete blood-vessels, holding feebly together an immense number of small oil-globules, among which a few very fatty cells, rounded, oval, or caudate in their outline, could be detected. The tumor in the parenchyma of the left hemisphere was therefore, in my opinion, a medullary carcinoma, which had undergone fatty degeneration, as neoplasmata in the brain are especially prone to do; and the growths lining the left ventricle, parts of the third, fourth, and fifth ventricles, and covering portions of the optic nerves were secondary formations of the same character, the analogues of which may occasionally be seen coating the pleura in cases of carcinoma mammæ, and the peritoneum in those of cancer of the stomach."

The facts revealed in the above statement afford much room for comment, such, for instance, as the statistics of the frequency of primary cancer of the brain, the palpable want of correspondence between the symptoms and the extensive disease found post mortem; and the various questions in neuro-physiology arising from the pathology of the case offer seductive temptations to digression. But they are contrary to the scope of the paper, which is intended to be clinical rather than literary or encyclopædic. Those interested enough can find the subject more exhaustively treated in the various monographs and journals. The statement that "little or no evidence of neuritis was discovered in the chiasm or the adjacent portions of the optic nerve tissue" does not at all exclude its existence at the ocular end of the nerve. This the observations of Von Ammon, Virchow, Iwanoff, Swanzey, Schwalbe, and Schmidt abundantly prove. By careful inquiry of the family, it was ascertained that so far as they could go back there was no cancer in the family, but that consumption was a family disease, the patient's mother dying of it three months after his birth, as before stated.

On the 23d of December, 1875, a great, broad-shouldered, sandy-haired farm-laborer of thirty-eight years was led into my clinic at Wills Hospital. It was evident, even at a distance, that he was amaurotic, from his staring expression and distrustful gait.

He stated that he had never had syphilis, and was the father of a healthy child. He himself had always been healthy until six years ago, when he had convulsions, with loss of speech and consciousness. His father was "kind of weak-minded," and died "melancholy" at seventy years of age. His sister died insane, at thirty, in an asylum. During the latter part of June, 1875, he was seized with pain in the head and vomiting of a bilious character on waking in the morning. This occurred once or twice a week at this time, but in October it happened every other day. At the same time he was giddy, and felt as though he would fall, and at times had a drunken feeling when walking. At this time he had no symptoms of typhoid fever, nor did his physician pronounce it to be such. At present he cannot count fingers, he has no light-perception, he cannot tell day from night. He stated that his sight began to fail during last October, and that "bursting" pain in the head preceded the obscurity of vision. After trying the regular faculty in his neighborhood, he was cured of his cruel headaches by the notorious "black doctor" of that region.

On ophthalmoscopic examination, in the reversed image both nerves were seen to be swollen, the arteries reduced, while the veins were enlarged and tortuous. In the erect image the apices and adjoining domes of the disks were best seen by glass 12, while there

was $\frac{1}{48}$ hyperopia of the adjacent retina. His respiration was normal, pulse 72. Hearing, smell, taste natural, and at the present he bears no mark of cerebral lesion save that upon the second nerve. In his own words, "if he only had his sight he would be able to work as well as ever."

The following case was one of recurrent neuritis. I saw the patient first in the stage of atrophy, after a squall of this kind had passed over the nerve and left it bleached from its action.

J. C., aged 32, a powerful, heavily-built man, with dark hair, eyes, and complexion; the father of several healthy children. He denies ever having had syphilis. He came to my clinic at Wills Hospital December 22, 1874, complaining of failing vision. The vision of the right eye was $\frac{20}{80}$, that of the left was $\frac{20}{40}$ not improved by any glass. There was no astigmatism. Both nerves appeared hazy or indistinct in their outlines; there was also slight atrophic curving of the disk-vessels. On the 6th of February he reported as improved greatly; the strychnia which he had begun at a dose of one-fortieth grain thrice daily, and had gradually increased to one-tenth grain, was continued. But on the 20th of April, 1875, he returned much worse, and I admitted him to the hospital for the purpose of submitting him to a thorough course of mercurial inunction, for I have found that this treatment cannot be carried out so thoroughly at home as in a hospital. Either the patient grows careless and neglects his periodical frictions, or becomes disgusted with the greasy application, and lastly, but not least, the surface often becomes chafed and irritable, requiring constant change of location. On his admission as an in-patient, his vision had declined to $\frac{1}{10}$, and the field was uniformly contracted in its periphery. His sense of smell had been lost for some time. His hearing was perfectly good. Both disks were swollen, the details being best seen by glass 16. He stated that he had had pain in the left side of his head for the last eighteen months. Twice a week or oftener he drops down and loses his hearing. To his own knowledge he never has any convulsions, but when he has the attacks before referred to, if he is walking his feet seem to drag upon the ground, and he has to lie down. Nine days after his admission he was reported to have had an epileptic attack, but I did not see him in it. His vision at this time was $\frac{1}{60}$. His pulse averaged 96, full and firm, but on the 25th of May it was 102, on return from a four-days' visit to his home. On the 1st of June, 1875, nine ounces of mercurial ointment had been administered by inunction, without any evidence of its systemic impression. Fifteen grains of iodide of potassium daily was added to the treatment. Later, his general health being apparently restored, the neuritis having again given place to an atrophic disk, I discharged him from the hospital, desiring him to call at intervals to permit me to keep him under observation. I have seen him quite lately, and he says that he is perfectly well save only for his sight, and that he has enough of that to enable him to walk in the street, but no more. Both disks are white and flat; the arteries are not much if any reduced, but the whole choroid is maculated, with neoplastic pigment. With the left eye he has no field; the right one shows a marked contraction from the last time of taking it.

The symptoms of both these cases seem to agree rather with those of tumor than with anything else, and to such a course am I disposed to attribute them, in spite of their present quiescence, periods of remission and apparent improvement being not rare in this disease.

CAUTION IN REGARD TO THE TREATMENT OF ACUTE RHEUMATISM WITH SALICYLIC ACID.

BY JOSEPH G. RICHARDSON, M.D.,

Attending Physician to the Presbyterian Hospital.

Read before the Philadelphia County Medical Society, April 4, 1876.

THE unreserved commendation of this therapeutic agent by several authorities seems to render needful a few words of warning, as inculcated by the following examples, against its employment in too large or too frequent doses.

The first case of acute rheumatism in which I tried salicylic acid was that of J. S., æt. 41, a patient in the men's medical ward of the Presbyterian Hospital, who took, on the 17th of April, 1876, five grains every three hours; on the 18th, five grains every two hours; on the 19th, five grains every two hours; on the 20th and 21st, five grains every three hours, when it produced nausea, and was discontinued, without any apparent effect upon the rheumatic complaint having resulted.

Case II.—D. J., æt. 22, admitted into the same ward on the 20th of April, after suffering for three days with acute rheumatism, affecting his hips, knees, and ankles. On April 21 (his evening temperature being 102⅕°) he took thirty grains of salicylic acid in powders of five grains each. On the 22d he again took thirty grains, and his evening temperature fell to 98½°. On the 23d he took fifty grains, and his temperature continued to descend, falling to

97⅘°; and the next day, his temperature having been reduced to 96½°, his pulse and heart-beat becoming intermittent, and the pain and swelling being entirely relieved, this medicine was stopped, and quinine, beef-tea, and milk-punch freely administered. He was discharged cured the following week.

Case III.—H. H., æt. 38, admitted into my women's medical ward of the same institution, April 21, 1876, with sub-acute rheumatism of the left knee, at first found great difficulty in retaining anything in her stomach, but after this was controlled, took, in three days, forty-five grains of salicylic acid, with the effect of relieving the pain and soreness to a great extent, and reducing the temperature from 101° on the 27th to 97° on the 30th, when it was discontinued in order to avoid serious prostration.

Case IV.—Mr. B., æt. 51, sent for me on the 23d of April, 1876, and was found suffering with acute rheumatism affecting the ankles, left knee, left hip, and right wrist. He was attacked on the 13th of April, but had not been under medical treatment, having, as he informed me, several times suffered terribly with rheumatism, and found out that medicine did not do much good; now, however, the pain was so severe that he had concluded to make one more trial, and see whether doctors had *learned anything new* in the last fifteen years.

On the 25th I gave him twenty-five grains of salicylic acid, in five-grain doses, three hours apart. On the 26th he took thirty grains, which he said he felt penetrating to the ends of his fingers and toes and relieving much of his pain. This favorable result was attended with profuse perspiration, rapid reduction of temperature, and marked diminution of the frequency and force of the pulse; and, as he complained of great prostration, and was slightly delirious on awaking from sleep, I substituted, on the 27th, full doses of quinia, milk-punch, and beef-essence, which improved his strength so much that on the 28th and 29th he returned to the salicylic acid, and on the 30th was free from suffering, had a normal pulse and temperature, could walk about his room a little, and expressed himself very grateful for the benefit he was sure he had derived from this "new medicine." A harsh, loud, mitral regurgitant murmur, present when I first saw him, moderated rapidly in tone and pitch during the treatment.

These cases, although, of course, too few to form the basis of any positive conclusion, suggest that, for acute rheumatism of adults, salicylic acid should be administered in doses of five grains every three hours for two days, and then, if no effect is apparent, five grains every two hours or every hour for forty-eight hours more, unless vomiting sets in earlier. If, however, on the second, third, or fourth day, profuse sweating, with reduction of pulse and heat of skin, occurs, the temperature should be carefully observed at intervals of six or eight hours, and when it descends to 99° F. the remedy should be discontinued, and quinine, or, if the thermometer points out a rapid fall below the *norm*, beef-tea, brandy, and carbonate of ammonium, must be promptly resorted to. By such precautions, treating the case as it were *thermometer in hand*, we can probably avoid the onset of serious or dangerous prostration, which in feeble subjects or severely-complicated cases might be attended with fatal results.

It seems obvious that the remarkable power which this *atoxic* antiseptic appears to possess in controlling rheumatic fever will, if proved to exist, contribute much support to that theory of the fungous origin of certain constitutional diseases, which my observations and experiments inclined me, several years since, to entertain. (See *Am. Jour. of the Medical Sciences* for July, 1868, p. 209, also *Philadelphia Medical Times*, Feb. 15, 1872, p. 183.)

WRINKLING OF THE LIGAMENTUM PATELLÆ A SIGN OF FEMORAL SHORTENING.

BY RICHARD A. CLEEMANN, M.D.

IN a recent number of this journal some statements of Mr. Thomas Bryant were quoted from the *Lancet* (January 22, 1876) relative to a simple mode of estimating shortening of the neck of the femur by measurements made about the hip-joint. The article recalled to me some observations made several years ago, on the evidence of femoral shortening furnished by wrinkling of the ligamentum patellæ. As the "wrinkle" was of use to me, I now record it, in the hope that it may prove equally serviceable to others.

Perfect tension of the tendon of the quadriceps extensor cruris, in the direction of the axis of the lower extremity, is an anatomical necessity for firm standing, normal walking, running,—any action which requires complete extension of the leg. To fulfil this condition the many-headed muscle is inserted by a thick, inelastic fibrous band, lying parallel to the line of the limb. One of the heads of the great extensor, and one which acts directly in the line of the limb, the rectus femoris, arises from the ilium. This must become flaccid when there is shortening of the thigh, if the limb be placed in the position of extension, and the relaxation will be most evident in the inelastic tissue of the tendon of attachment, and particularly noticeable in that portion between the patella and the tubercle of the tibia, where the structure finds its greatest development,—the ligamentum patellæ.

When, as may happen in old age, the pad of fat which lies under the ligamentum diminishes in size, the wrinkling may be very conspicuous, as in the case of an aged female with fracture of the neck of the femur, in which I noted a furrow sufficiently deep to suggest rupture of the tendon. On the other hand, in the instance of a vigorous man, the subject of a similar accident, there was a mere "crease" above the tubercle; this, however, was sufficiently marked to lead me at once to the true nature of the injury, which had not before been suspected. It is evident that the liability to variation in the amount of subjacent elastic fat must be taken into consideration in attempting to estimate degrees of shortening from the depth of the wrinkle in the ligamentum.

TRANSLATIONS.

Affection of the Cornea resulting from Section of the Trigeminus.—Dr. Seuftleben (*Centralbl. f. Med.*, 1876, No. 7; from *Virchow's Archiv*) states that section of the trigeminus, at its exit from the base of the skull, in rabbits, is followed, after ten to twelve hours, by a decided circumscribed opacity of the cornea, when the eye is kept open. This opacity never reaches the edge of the cornea, but after some hours a diffuse (secondary) cloudy opacity begins at the latter point and spreads gradually inward. The cause of the primary opacity does not lie in the dryness, favored by keeping the eyelids open, for when the eyes were immediately closed by a cover no change took place. It is not to be looked for in certain trophic nerve-fibres in the trigeminus, for the affected eye reacted to the same stimuli as the healthy one, and did not show, either in regard to the origin of the affection or in its course, any difference from the latter, in which, by mechanical irritation, the same condition could be brought about. The affection is rather to be attributed to traumatic causes, which are allowed full play on account of the anæsthetic condition of the eye, and which cease to affect it when it is protected from their influence. Microscopic examination shows the opacity to proceed from circumscribed necrosis. Similar extirpation of the superior ganglion of the sympathetic is without influence upon the condition and course of the affection of the cornea consequent upon section of the trigeminus. x.

Function of the Membrane of the Round Window.—A difference of opinion has existed respecting the part played by the membrane of the round window in the conduction of sound. Without doubt the excursions of the ossicles of hearing are conveyed through the water of the labyrinth to the membrane of the round window, as shown by the experiments of C. H. Burnett (*Archives of Ophthalmology and Otology*, vol. ii. No. 2, 1872), and by the later corroborative investigations of Weber-Liel. Some authorities have thought that perhaps the membrana tympani secundaria participated *directly* in the sound-waves transmitted to it by the membrana tympani through the air of the tympanum. Johannes Müller inclined to this opinion, but the experiments of Schmeideham and Hensen seemed to show that he was incorrect in his views. Recently, Weber-Liel (*Centralbl. f. Med.*, January 8, 1876) has performed not only very interesting but apparently conclusive experiments respecting the question. The result of these experiments, the process of which is detailed in the *Centralblatt*, l. c., seems to prove that the membrane of the round window is set in vibration by sound-waves from the membrana tympani, conveyed through the air of the tympanic cavity. x.

Secondary Degeneration of the Spi-

NAL CORD.—Dr. Fr. Schultze contributes the following to the *Centralbl. f. Med.*, No. 10, 1876. While making the post-mortem examination of a child, some two years of age, who had died with symptoms of hydrocephalus, he found degeneration of the lateral columns of the cord, lessening as it extended downwards, but pervading the entire medulla. It showed the typical seat and form observed in injuries or serious affections of the central motor apparatus of the brain. In the cervical and dorsal regions the anterior columns also appeared to partake in the degenerative changes; the posterior columns and the gray substance were unaffected, the central canal obliterated. The degenerated portions presented, in freshly-prepared specimens, a decidedly gray color, and microscopic examination showed, instead of the normal tissue, a very thick net of exceedingly fine connective tissue, strewn with numerous roundish nuclei. The connective-tissue fibrils were not easily demonstrable in longitudinal section. Deiter's cells were not distinctly isolable. Only a few remaining axis-cylinders and medullary sheaths were visible in the sclerosed tissue. No groups of nuclei or nuclear cells; vessels not fattily degenerated.

The pyramids were flattened and changed like the lateral columns, only more nerve-fibres, with their axis-cylinders, could be seen. The degeneration could be followed through the pons to the cerebral peduncles. The large motor brain-ganglia were compressed, but without particular change in structure. The macroscopic appearances in the brain were those usually found: enormous extension of the four cerebral ventricles, with decided compression of the brain-substance; extreme thickening of the ependyma.

The changes observed appeared most easily explicable as a secondary degeneration following the affection of the central motor apparatus of the brain; the possibility remained, however, that in the very early stages of development of the central nervous system the motor channels had not experienced normal development, and had degenerated with the beginning of the hydrocephalic alterations.

The child had suffered during life from contraction and tension of the muscles of the extremity, besides frequent attacks of tremor.

In the case of a woman, 50 years of age, who had died with symptoms of hydrocephalus, the effects of the disease did not seem to have reached beyond the brain proper, the spinal cord being intact. In another case, that of a man who had died of sarcoma of the anterior section of the corpus callosum, a sharply-defined degeneration of the fasciculi cuneati of the posterior columns was observed. The columns of Goll as well as the posterior gray horns of the cervical portion were intact. The degeneration could be traced to the dorsal cord. Microscopic examination showed want of the greater part of the axis-cylinders of the fasciculi cuneati, and considerable atrophy of the remainder. The nerve-medulla was present for the most part, the neuroglia not decidedly increased. No increase of nuclei, no granular collections, no corpora amylacea, no fatty degeneration of the vessels.

It is thus seen that just those portions of the posterior columns were degenerated in cerebral disease, which in degeneration due to spinal disease are always found intact. As to the connection between the cerebral affection and the spinal degeneration, the explanation of this must be left for further investigation. x.

NERVE-SECTION IN NEURALGIA.—If in neuralgia strong pressure brings out a "painful point," it may be expected that section of both the direct and recurrent branches of nerves running towards this point will bring about a cure. Should, however, the pain continue, the seat of the affection probably lies nearer towards or in the centres, or perhaps in the anastomosing branches. This last may be suspected when firmer pressure upon the neighboring anastomoses causes the pain to diminish. Section not only of the subjectively sensitive nerves but also of the neighboring sensory branches is to be avoided.—Arloing and Tripier, *Centralblatt für Med.*, 1876, No. 9; from *Gaz. Hebdom.*, 1875, No. 35. x.

URTICARIA FOLLOWING THE STING OF A WASP.—Rause (*Centralbl. f. Med.*, 1876, No. 8; from *Gaz. Méd.*, 1875, No. 38) relates the case of a man who, while drinking beer, accidentally swallowed a wasp, which in passing down the œsophagus inflicted a sting just below the level of the thyroid gland. An eruption of urticaria ensued, first upon the neck, and then over the remainder of the body, remaining most severe in the cervical region. x.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 13, 1876.

EDITORIAL.

MEDICAL EDUCATION IN THE LEGISLATURES.

THERE seems to be some prospect of legislators in this country grappling with the medical problem, and although so far the activity has not been well directed, yet its existence is hopeful as a sign of life. In Ohio, a bill has passed two readings which requires every one who is desirous of studying in any of the medical schools of the Commonwealth to pass a preliminary examination before a State board. It is hardly necessary to point out how this will work ruin to the medical schools of Ohio by shutting them off from competition with similar institutions in neighboring States. The measure is so obviously unfair that it is not probable that it will become a law. We sincerely trust that some day legislation will take from the schools the right to grant permission to practise; but in all other matters legislators should leave the schools to work out the problem as to the best methods of professional teaching. When a severe State examination must precede entrance into professional life, the school that best fits for that examination will get the scholars.

The California Legislature seems to be under the old delusion, which we had hoped was relegated to the confines peopled with witches and other superstitions of the past, that an ordinary American medical diploma means anything more than that the possessor has spent a few dollars and crammed up a few primary medical facts. The Solons of the Occident have passed a bill for the regulation of the medical profession, which makes the possession of a diploma the foundation of the right to practise.

BURN BRAE.

BURN BRAE, its scope and its advantages, are probably known to many of our readers, but we feel justified in calling attention to them because private asylums are far less frequent with us than in England, and because those who would prefer them are often forced into patronizing the public institution because they do not know where to find exactly what they want. We do not propose here to discuss the comparative merits of private and public institutions as affording opportunities for treating the insane, but we do claim for the asylum of Dr. Given that it excellently meets its purpose, and offers to any one preferring establishments of its kind a most excellent retreat. The character and skill of the medical attendance are probably not excelled in the world, and the situation is most desirable, just far enough from a large city to escape the publicity and excitement of the suburbs, just near enough to be easily accessible and to command the services of renowned medical specialists as consultants.

CORRESPONDENCE.

NEW YORK, April 29, 1876.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

AT both of the last two meetings of the County Medical Society very interesting papers were read. The first was by Edward G. Janeway, on the subject of "*Leucocythæmia*," and was all the more valuable from the fact that it was based to a large extent on clinical observation. During the last three years he has had three cases of the affection under his care, all three of which are now living, and he thought it might be of service to call the attention of the profession more particularly to the disease, because, though all three had been for a longer or a shorter period under the treatment of other physicians, in not one of them was leucocythæmia recognized by the medical attendant.

The first case was that of a male, aged 32, whose mother had died of consumption, but

whose father was healthy. He had formerly been in the army, and then for five years was employed in some steel-works, where he was exposed oftentimes to extreme high temperature, and would then imprudently go out into the cold immediately afterwards. For the three years preceding February, 1874, when he was obliged to give up steady work, he was engaged in driving. In 1862 he had an attack of swamp fever, and in 1865 suffered from gonorrhœa, which was followed by gleet. Three years ago he first began to complain, and then suffered from pain in the left side, which was pronounced pleuritis, though there was no fever. After a time he noticed slight swelling of the feet and legs, and a lump in the left side. The tumor is now smooth and cake-like, extending as far anteriorly as the umbilicus, and the abdomen is very prominent. His strength has been failing more markedly for a year past, and he now suffers considerably from shortness of breath. For the last three months he has had epistaxis daily. His weight is one hundred and thirty-nine pounds, and the degree of anæmia is comparatively slight. A microscopic examination of the blood shows the red corpuscles to be diminished, bearing the ratio of about four to one white. Most of the white globules are one-three-thousandth of an inch in diameter. By the action of acetic acid three or four nuclei are rendered visible in each. The blood has presented nearly the same characteristics for the last eighteen months. In this case the induced current has been used without benefit, and iron, in large quantities, has also been tried. For a time he took half a pint of fresh bullock's blood daily, with apparently some good result. One day, however, the butcher's knife accidentally penetrated an animal's œsophagus, and some of its contents getting into the blood so disgusted the patient that he could never be prevailed upon to resume the remedy. Since he left off the drinking of blood he really seems to have failed quite perceptibly.

The second case was that of a female, aged 34, with no family taint. She has been married eighteen years, and six months before the first symptoms of her present trouble commenced, she had an abortion. During the last two years she has suffered from more or less pain in the left hypochondrium, and also from shortness of breath. She has been troubled with varicose veins of the lower extremities, and on one occasion lost a considerable quantity of blood from their rupture. She menstruates regularly about every three weeks. Three months ago she noticed a lump in her left side, and the tumor has now an area of about ten by twelve inches, reaching as far as the umbilicus in front. Anæmia is not marked in her case either.

Under the microscope the white corpuscles of the blood are seen to be increased, varying from one-third to one-fifth the number of the red. They are from one-two-thousandth to one-three-thousandth of an inch in diameter, and exhibit nuclei when treated with acetic acid.

The patient does not seem to have lost any ground lately, and says she feels better than she did some time ago. She is fully competent to attend regularly to her avocation, which is that of keeping an apple-stand on a corner of Broadway.

The third patient is a painter by trade, and about 40 years of age. Ten years ago he suffered from intermittent fever, and four years ago from an attack of smallpox. Two years ago he began to be troubled with a cough and shortness of breath. His countenance is now marked with extreme pallor, which, however, only became noticeable about three and a half months ago. There is some enlargement of the glands, but this, he says, has continued ever since the attack of variola. Auscultation of the heart reveals the presence of a basic systolic murmur. The superficial area of the spleen is about five by six inches. The blood, when drawn, has the appearance to the eye of water stained with a few red streaks. The white corpuscles are found to be about equal to the red in number, and most of them are very small, being only two-thirds of the size of the red globules.

The patient suffers from fever, cough (due to bronchitis, and, probably, peribronchitis), diarrhœa, and ascites. He is confined to bed, and seems to be failing rapidly.

In speaking of the origin of leucocythæmia, or, more correctly, of our knowledge of the disease, Dr. Janeway gave an account of the unfortunate dispute between Bennett and Virchow. To the former must be given the credit of first having described the affection, though he mistook its true nature. His article, entitled, "Suppuration of the Blood," appeared in an Edinburgh journal in 1845, and only six weeks after its publication Virchow's "White Blood, with Remarks," was given to the profession. Five years before, Credé is said to have met with a case of leucocythæmia, but he was waiting to meet with another similar one before publishing an account of it. Bennett was therefore the first to make known the microscopic appearances of the blood in the disease; though to Virchow is undoubtedly due the honor of recognizing their correct explanation. Bennett positively denied at that time that the numerous colorless disks visible in the blood were white corpuscles.

Dr. Janeway mentioned the three varieties of leucocythæmia, the splenic, the glandular, and that rarer form, described by some authors, which is known as the medullagenic, and characterized by changes in the microscopical appearances of the marrow of the bones, and then ran over the symptoms of the disease in general in rapid detail. These are often very insidious in their onset, but in some

cases are of marked severity from the first. Pain in the left side is not infrequently the initial symptom, and this may possibly be due to inflammation of the capsule of the spleen. Sometimes there is a distinct sense of fulness, and this might be explained by the stretching of the splenic capsule, which probably takes place in some instances. In quite a large percentage of cases the patient notices a lump in the side after a time, and this is sometimes of apparently very sudden origin.

Pregnancy seems to exert an unfavorable influence on the disease. In two cases recorded by Robertson, of Edinburgh, death ensued in eleven and fourteen days after confinement respectively.

A chemical analysis of the blood shows that its water and fibrin are increased in quantity, while its iron is diminished. Hypoxanthin is sometimes found to be present.

The great pallor which is so often noticeable is probably due more to a diminution of the red corpuscles of the blood than to an increase of the white. The blood, when drawn, does not look white, and hence Dr. Janeway prefers the term *leucocythæmia* (signifying white corpuscles) suggested by Bennett, to Virchow's name of *leucæmia*.

Great loss of strength is one of the earliest and most constant symptoms of the disease. In some cases, however, this is not at all marked, while in others it is greatly increased by discharges, hemorrhages, etc.

Dypsnœa (without appreciable cause in the condition of the lungs) is common. It is, however, more subjective than objective, and seems to depend on the impoverished state of the blood.

Dropsical effusions are sometimes met with, and diarrhœa existed in one-third of all the cases which Dr. Janeway has found recorded.

Hemorrhages are also quite frequent, and may come from the nose, lungs, stomach, or bowels.

Loss of appetite is not usually a prominent symptom. Vomiting sometimes occurs. Cough, when present, may be due to the pressure of enlarged glands on the bronchial tubes; and the same condition may also occasion difficulty of deglutition. This was found to be the case in four instances.

Emaciation is pretty constant, and some patients suffer from cephalalgia, abscesses, etc.

Fever is frequent towards the close of the disease, and is characterized by exacerbations at night.

In the splenic variety dysuria is sometimes caused by the pressure of the enlarged spleen on the bladder, and hypoxanthin is occasionally found in the urine.

Out of seventy-nine recorded cases, death took place from asthenia in thirty-four. The other principal causes of death were diarrhœa, tuberculosis, apoplexy, and asphyxia (from pneumonia or œdema of the lungs).

It is difficult to determine the duration of the affection, as it varies from six months to six years. In the above-mentioned cases persons of both sexes and all ages, from six weeks up, were attacked. Some of the diseases noted as preceding the leucocythæmia were abscess, arthritis with anchylosis, furunculosis, fracture of rib on left side, prolonged lactation, malaria, abortion, rheumatism, scarlatina, syphilis, and typhoid fever; but we are too apt to reason *post hoc propter hoc*. It is a significant fact that three out of the seventy-nine cases occurred in painters, though none of them had suffered from lead-colic. After death the weight of the spleen was found to vary from ten ounces (in a child) to fourteen pounds. The dimensions of the largest one were 14, 10, and 4 inches.

On section, the consistence and color of the spleen are found to vary very greatly in different specimens. The increased size of the organ is seen to be due mainly to an increase of its glandular elements, and infarctions of the Malpighian corpuscles are frequently met with. The liver is sometimes enlarged, and even in cases in which the spleen is not. The weight of the largest in the number was fourteen pounds. This increase is of a hyperplastic nature; and this is also true of the enlargement of the glands of the lymphatic system (frequently without the spleen being increased in size). In the medullagenic variety there is hyperplasia of the red marrow.

Treatment.—Cases are said to have been cured by quinia, phosphorus, mercury (when apparently due to syphilis), and transfusion (in cases of the splenic variety). Ergot has been employed hypodermically, with some measure of success, by Da Costa. Dr. Janeway tried it in one instance, but it occasioned such troublesome abscesses that he was obliged to desist. The patient could not tolerate it by the mouth. In the glandular variety, hypodermic injections of iodine, acetic acid, alcohol, or ergot might be made directly into the affected tissues, when accessible. But, whatever the treatment, the disease usually progresses with more or less steadiness to a fatal termination.

The other paper before the County Medical Society to which reference has been made was one on "*The Nature of Suppurative Processes in the Skin*," by Dr. Charles Heitzmann, the German pathologist now residing in this city. In some preliminary remarks on the clinical features of different varieties of dermatitis, he advocated the exclusively local origin of eczema, furunculus, and erysipelas. The latter (as first claimed by Hebra) he believed to be always due to the irritation produced by a larger or smaller accumulation of pus, though the latter might not always be evident. With the most of the German school, he professed himself a skeptic as to the existence of such a thing as a dyscrasia or a diathesis. Such pustular affections as impetigo

and ecthyma, he said, were formerly supposed to be due to a constitutional dyscrasia, and ranked as distinct diseases. Hebra has proved, however, that they are simply the accompaniments of other affections, and actually due, in reality, to the irritation and scratching incident to them. Dr. Heitzmann demonstrated the same thing entirely to his satisfaction on his own person in 1867. At that time he had one of those unexplained attacks of itching of the legs which almost every one is liable to occasionally, and which occur without appreciable cause. In order to observe what effect would be produced, he kept up a constant scratching of the affected parts, even after the itching had subsided; and in this way they were denuded of epithelium, and excoriations were caused, which soon became covered with crusts and surrounded by small inflamed areas. The irritation being still kept up, eight distinct impetiginous pustules, covered with brown crusts, presently resulted. Five of these healed kindly, without leaving permanent cicatrices, but three of them turned to regular ulcers, which, as he was obliged to walk about a great deal at the time, constantly increased in area and depth,—the largest one becoming of the size of a five-cent piece. At last he was obliged to give up his usual avocations, in order that he might remain quiet and give them a chance to heal. Under the influence of rest and the occasional application of nitrate of silver they soon got well, but the scars remained for several years, and are only now disappearing.

Passing to the microscopical portion of his subject, Dr. Heitzmann made some general remarks on the phenomena and theories of inflammation, and especially upon the views of Virchow, Cohnheim, and Stricker. The latter had conclusively shown that the elements of connective tissue, for the most part, form pus-corpuscles, as originally claimed by Virchow; although those in the immediate vicinity of the acute inflammatory process were undoubtedly emigrated white blood-corpuscles, which Cohnheim maintained that all pus-corpuscles were. Heitzmann himself had repeatedly observed the emigration of white blood-corpuscles; but as he noticed that they always soon disappeared, he was of the opinion that they re-emigrated into the lymphatics after a few hours.

He then propounded his own peculiar views on the ultimate elements of tissue-structure, which he believes will ere long entirely supersede the generally accepted cell-doctrine.

According to this *bioplasm doctrine*, as Dr. Elsberg has called it, instead of so-called cells we have protoplasmic matter, which consists of vesicular shells, with apparent nuclei, every part of which is filled with living granules, floating in a lifeless protoplasmic fluid. These granules are all connected with each other by means of a living net-work of delicate filaments, which passes through the entire structure of the tissue, and may also serve to connect the latter with adjacent tissues. This living net-work is surrounded by a lifeless basic substance.

During the inflammatory process, the fine threads of living matter connecting the several protoplasmic bodies become torn away by the force of its action, and we thus have pus-corpuscles formed, which are independent of one another. The granules are free to pass out through the walls of the shell or vesicle. Pus is then simply metamorphosed protoplasmic matter. It is not a tissue, and never forms tissues, but always accompanies disintegration of tissues.

There is a vast difference in the microscopic, as well as gross, appearances of different specimens of pus, so that from these alone it can be unmistakably told whether the individual is in a sound or depraved state of health. The microscopic examination of pus will often discover the presence of a taint in the system when such a condition may not otherwise be suspected. In pus from the healthy subject the corpuscles are found to contain a large quantity of living granular matter, while in that from the scrofulous individual the granules are scanty, which is also the normal appearance of the mucous corpuscle. In unhealthy pus, prolongations of the living net-work before spoken of frequently extend out through the shells of the corpuscles; but this is not the case in pus from the healthy individual.

Dr. M. A. Pallen, Professor of Diseases of Women at the University, has read a paper on Perineal Lacerations, at the Medical Journal Association. In order to prevent the accident, he recommended the method of making large-sized incisions on both sides, in the intervals between the pains. He was of the opinion that perfect union of a ruptured perineum rarely or never took place spontaneously.

In the treatment, he advocated the immediate application of silver-wire sutures, unless such a procedure were contra-indicated by the exhaustion of the patient, or other unfavorable condition. Some of these should be deep, and not more than a line from each other, and others superficial, and placed in the intervals between them. The bowels should be kept soluble by means of warm enemata, and not constipated with opium, as it is the common practice to do. The vagina should be kept washed thoroughly clean, and the bladder emptied at regular intervals; and it is also of service to support the nates by means of an inflated circular rubber cushion.

Professor Darby thought that a much firmer hold could be taken on the deeper tissues by means of the old quill suture than by the silver-wire suture.

At the last meeting of the Association, Dr. William S. Ludlum read a paper on Dispensaries, in which he gave a detailed account of their history, both in this country and in Eu-

rope. These institutions are of much more recent origin than hospitals, yet the first of the latter (at least, of which we have any record) was not established until A.D. 460. This was founded by Nonus, a benevolent bishop, at Edessa, in Mesopotamia, a place which then contained a famous school of theology. Such an institution was entirely unknown among the Greeks and Romans, notwithstanding their high culture and civilization; and even in the first centuries of the Christian era, so far as is known, there was none in existence. The first hospital in Europe was founded at Rome, in the latter part of the fifth century, by a lady named Fabiola. In the sense, however, in which we understand it,—an institution devoted exclusively to the reception and care of the sick,—the hospital cannot be said to have existed until the eleventh century; and it was not until five hundred years later that the first dispensary was established,—an act of philanthropy for which the world is indebted to a woman. In the year 1559, the wife of Christopher, the reigning Duke of Würtemberg, caused an apothecary's shop to be erected in the ducal palace at Stuttgart, for the purpose of supplying medicine to the poor; and this she maintained at her own expense.

The dispensary as a permanent institution was established in England towards the close of the seventeenth century; but in France not until 1803, when the Philanthropic Society of Paris set in operation five dispensaries in that city. In 1805 an act was passed by Parliament providing for the establishment of dispensaries throughout Ireland, as well in the most sparsely-settled regions as in the cities and populous towns. In 1836 there were four hundred and ninety-four of these institutions in existence; and in 1851 their efficiency was very greatly increased by a second act of Parliament in reference to them.

It appears that to Philadelphia belongs the honor of establishing the first dispensary on this continent, in 1786. The New York Dispensary, which was founded in 1791 and incorporated in 1795, was the first in this city, and there are now about thirty here. The first one was organized in Boston in 1796. As a rule, our American dispensaries are said to be better than those of Europe.

Dr. Erskine Mason has recently performed an amputation at the hip-joint, at the Roosevelt Hospital. The patient had suffered from an unreduced dislocation of the hip-joint from early life, so that the limb was perfectly useless, was excessively atrophied, and could be moved in every direction with the greatest freedom. The patient was exceedingly anxious to have it taken off; and, after a consultation of surgeons, it was deemed advisable to accede to his request. An Esmarch bandage was applied to the thigh, with a tourniquet to the abdominal aorta; and Dr. Mason was assisted in the operation by Professor Markoe. The patient has done well up to the present time.

Some time ago it was announced that Cozzens's Hotel, at West Point, had been purchased by Mrs. William H. Osborn, daughter of the late Jonathan Sturgess, of this city, and had been presented by her to the New York Hospital Society, for the purpose of converting it into a home for convalescent patients from the New York City hospitals. The Society a few years ago purchased some ground near White Plains, with the intention of establishing such an institution there; but this kind offer seemed to render the erection of such a building unnecessary. The hotel is situated in one of the most commanding and healthful positions in the beautiful Highlands, and the property comprises forty acres of land altogether. The main building is three hundred and fifty feet long by fifty feet wide, with a side wing seventy-five feet long by forty feet wide; and there are four cottages belonging to it.

It now seems, however, that by reason of legal defects in the mortgage foreclosure, under which the sale was made, no valid title to the property can be conveyed by the referee, and therefore it is impossible to consummate the sale; so that it has been necessary to return the purchase-money to Mrs. Osborn.

The library of the New York Academy of Medicine has been enriched to the amount of several thousand dollars by the donation to it of a large number of very valuable works from Dr. Samuel S. Purple, President of the Academy, and Professor Isaac E. Taylor.

A milk-man here has recently been sentenced to one month in the penitentiary for selling adulterated milk; and, having contested the power of the Board of Health to institute the prosecution in such a case, the sentence passed upon him at the Special Sessions has now been affirmed by the General Term of the Supreme Court. This decision is important, being the first case of the kind carried to the Supreme Court. The power of the Board of Health to act in such cases had previously been undetermined, and there was some apprehension of a judgment adverse to it.

The following elections and appointments in this city have been made. Dr. John C. Peters succeeds Dr. Hammond in the Presidency of the Neurological Society. Drs. A. A. Smith and Paul F. Munde are to be Fordyce Barker's assistants at the Woman's Hospital. Dr. William M. Polk has been appointed Lecturer on Materia Medica and Therapeutics at Bellevue College, Dr. A. A. Smith lecturer adjunct to the chair of Clinical Medicine, and Dr. Leroy M. Yale lecturer adjunct to the chair of Orthopædic Surgery, at the same school.

And now permit your New York friends to wish you, and all Philadelphia, an auspicious inauguration of the grand Centennial show.

PERTINAX.

LONDON LETTER.

THE chief event we have had here in the profession, since I last wrote, is the election of the President of the Royal College of Physicians. This is, perhaps, not a very important matter in itself; but the present election is remarkable in that an old custom has been broken for the first time. In accordance with old associations, the President has hitherto always been a graduate of the Universities of Oxford or of Cambridge. Graduates of these Universities become members as soon as they present themselves, and are invariably made Fellows as soon as the four years which must elapse are passed. Consequently, the coveted F.R.C.S. is gained by the graduates of these English Universities at the earliest date, whether they have shown any capacity or not, while for other graduates an honorable career may go on for years without recognition by the College. Not that this is felt a grievance by young men; but often it has been hard upon older men, who, if they did not possess friends in the Council of the College, must live on without the Fellowship they desired and merited. In the present election we see good evidence that the College is becoming emancipated from the thraldom of old traditions, and is imbibing some of the catholic spirit of the present time,—not before it is needed.

Dr. Risdon Bennett, the new President, is a graduate of the illustrious University of Edinburgh, of the year 1833. He was attached to St. Thomas's Hospital, and, having served his term of office, is now consulting physician to that institution. He is still at work at the City of London Hospital for Diseases of the Chest, and has one of the largest city practices; being one of the few men who have not, as their prosperity increased, moved westward. He is rather one of the men who have worked, than of the writing class, and his contributions to our literature are few, but are of value. He was last year made a Fellow of the Royal Society. The representative of the old régime, Dr. Henry Pitman, is an M.D. of Cambridge, and consulting physician to St. George's Hospital, a place always well represented by Cantabs. He has for years been Registrar to the College of Physicians, and is an amiable and estimable man. The issue was a very narrow one, Dr. Bennett numbering fifty-five, Dr. Pitman fifty-two supporters. The claims of the comparatively juvenile University of London were represented by Sir William Jenner, Sir William Gull, and Dr. Quain; but evidently these gentlemen have been lukewarm in their candidature, from the small numbers of votes they polled.

The College of Physicians is a notable body as regards its functions. Until the Medical Act of 1868, it was necessary for any one aspiring to practise medicine in London, in a higher grade than that of apothecary, to become a member. Since the passing of the Medical Act, this has been abolished; but the membership of the College is essential to the holding of an appointment at any hospital of high standing. No matter where the aspirant to a hospital appointment has graduated, he must pass the examination for membership. This is a very fair and honest examination of an all-round character, including clinical examination in the hospital wards. It retains so much of its ancient character that each examinee, after having done a written examination in Latin, etc., has to stand up and read a passage from some Latin author to the President, and translate it before the other examiners, during his *viva voce* examination. Having thus put their seal upon him, the College guarantees his proper behavior, and calls offenders before its council, and reprimands and fines them according to the sum of their offences, or, if necessary, strikes them off the roll. Further, it exercises a moral control over its members, in that, if any one of them so conducts himself that he cannot be censured, and yet cannot be approved of, he is denied the Fellowship. There are some very successful physicians in London, who will never attain the F.R.C.S., even if they were to seek it in sackcloth and ashes. Consequently, the movements of the College of Physicians always attract attention, at least among the leading men in the metropolis.

In his Croonian Lectures, Dr. Dickenson relates a curious case of congestion of the kidneys, brought on by a cold drive over a Yorkshire moor, where the swelling induced was so great that the capsules of both kidneys were rent, and a massive coagulum of blood was found in the gaping tear. In this case the pain in the loins was so great that it was supposed there must be a renal calculus.

The discussion on Syphilis, at the Pathological Society, commenced by Mr. Jonathan Hutchinson, seems to have met the fate of most matters discussed there, viz.: to have left everybody pretty much where they were before. Mr. Hutchinson holds the one-poison theory, and thinks that though soft sores are usually free from any tendency to infect the system, if the matter which produced the sore contained syphilis poison,—just as corn may contain some poppy seeds, and when sown produce a mingled crop,—constitutional symptoms will be produced. Even this, though it recommends itself to one's experience, was not admitted, nor were the symmetrical skin-eruptions held to be pathognomonic.

Some very good authorities agreed with Mr. Hutchinson that tertiary diseases are developments of deposits in the connective tissue left over from the secondary outbreak. At least, the discussion may be said to have ventilated the matter to a slight extent, even if nothing more.

There are a host of assistant-surgeonships vacant at present: at St. Thomas's, where one

of the staff, it is rumored, is going to enter the church; at Charing Cross, where one of the surgeons has left for general practice in the county; and at Middlesex, by the sudden death of the eminent surgeon, Mr. Campbell de Morgan, a gentleman universally esteemed; while at King's College there is a new appointment. It is said that for this last, Gerald Yeo, the accomplished professor of physiology, is a candidate, but that he will not be successful. King's College contrives to conduct itself in such a manner as to grieve its friends and to excite the scorn of its enemies. Some years ago it threw off a part of its best men, as Anstie, Heath, Bellamy, and others, after which it was obliged to go afield for professors, as Rutherford and Ferrier, from Edinburgh, and Yeo, from Dublin. But their necessities do not overcome their jealousy of the foreign blood they are compelled to seek, and a clique obstinately oppose any hospital appointment for those who have come to their aid in their straits. The usual rubbish, for it is nothing more, is talked about overlooking their own men and the necessity for promoting some deserving ex-house-surgeon. The difference betwixt a cause and a pretext comes out well here: the above is the pretext; the real cause of their conduct is the objection to juniors of acknowledged capacity, so that their own light may not be paled, but show resplendent by comparison with the feeble flame of inferior subordinates and juniors. If King's is really to prove attractive to students it must be by reversing its policy, and always securing the best men that offer themselves. Its practice does not cry so loudly for reversal, as their notorious incapacity to provide professors of their own rearing, which has compelled them to accept, however unwillingly, men taught and trained efficiently elsewhere. In justice, it must be said that all are not so influenced; but it would be invidious to make any selection here, and, by stating who are sheep, to leave the goats to be arrived at by an easy inference.

At St. Mary's Hospital there has just occurred a case of recovery from rabies. The boy now is apparently well, and is walking about, but the details are not published yet. The plan of treatment adopted was that of injections of chloral hydrate. The details will be very interesting, and I will refer to them when Dr. Broadbent publishes them.

The newest thing in therapeutics is the plan of treating nasal catarrh by the local application of bismuth, advocated by Dr. Ferrier. Being afflicted with nasal catarrh himself and having some bismuth at hand, he tried a pinch, and the relief so afforded was such that a few more pinches were taken from time to time, by which means the catarrh was speedily cured. His further experience has decided in favor of an admixture of gum acacia in powder, and the addition of a little morphia. By this means lightness is given to the powder, and its local sedative action is increased. It seems very probable that catarrhal snuffs of various kinds will soon be among the stock preparations of all chemists, and that a new feature will be added to the present advertisements. Another new thing is an ornamental bottle containing a little piece of lint at one end, and some nitrite of amyl in the other compartment, for the relief of palpitation due to arteriole spasm, hysterical or gouty. This last idea originated with Dr. Milner Fothergill.

A new society is about to be formed in London. A preliminary meeting has been held at the house of Dr. Burdon-Sanderson, the well-known physiologist. The design is to form a society where papers of a physiological character may be read and suitably discussed. At present they have to be read before societies where the bulk of members are either too little interested in physiological research or perhaps even too little acquainted with it to take an interest in such papers, or to discuss them adequately. By the formation of such a society an impetus would be given to the production of such papers as their authors would feel certain of their receiving the attention they merit. Allusion to physiologists leads up to the much-discussed question of vivisection. It is not probable now that the government will legislate on the matter this session, which is to be regretted, in so far that the good effects of the report of the recent commission may be lost, or comparatively lost, if the matter be deferred to another session, and the wild and unscrupulous statements so persistently issued by the anti-vivisectors will, during the interval, have no authoritative denial given to them.

The difficulties of the British Medical Association as to their annual meeting seem but to increase. The President-elect, Sir Cordy Burrows, has died, and the profession of Brighton are as hostile to the meeting being held there as ever they were, showing that personal objections to the president-elect did not form the ground of their hostility. The Committee of Council are thus placed in a dilemma, from which, however, an attempt has been made to relieve them. Sheffield has come to the rescue, and is willing to undertake, even at this late hour, the responsibility of reception. With its many objects of interest and its wealth, in which the profession to some extent share, Sheffield is well able to give an adequate as well as a hearty reception, while holding the meeting there may tend to throw light upon the degeneracy, mental and bodily, which hangs like a Nemesis around the great hives of industrial humanity.

THE University of Moscow celebrated its hundred and twenty-first anniversary on January 12. The number of students is 1259, of whom 694 belong to the Faculty of Medicine.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 27, 1876.

The PRESIDENT, DR. WILLIAM PEPPER, in the chair.

CANCER of the peritoneum. By Dr. J. H. HUTCHINSON.

See "Original Communications" (p. 385) in current number of the *Times*.

Case of cystic growth of the mammary gland. By Dr. C. B. NANCREDE, for Dr. J. ASHHURST, Jr. Notes and remarks by Dr. Nancrede.

M. B., 40 years, widow, having borne children, came to the P. E. Hospital, January 10, 1876, complaining of a growth in her left breast, which caused her uneasiness. She stated that after one of her pregnancies this breast had gathered, and was permitted to evacuate itself. She some years back suffered from metrorrhagia, and again from scanty menstruation. Between two and three years ago she noticed a tumor, as she said, in her right breast, which disappeared after friction with ointments, etc., so she tried the same plan with this present growth, but with no result. She was unaware of its existence until three weeks before consulting me, when she discovered it, the growth then being about as large as when I saw it. She complained of sharp lancinating pains, extending from the tumor into the other breast, and it was tender to handle.

When first seen by me there was considerable œdema from the constant handling, rubbing, etc., which, with some of the tenderness, disappeared after two weeks' abstinence from any local treatment or manipulation. The growth felt about as large as a hen's egg, was ovoid, hard, and freely movable beneath the skin and over the pectoral muscle. The axillary glands were free from any enlargement or tenderness, and there was no retraction of the nipple. She passed from my hands into those of Dr. J. Ashhurst, Jr., by whose kindness I am enabled to present this specimen. Dr. Ashhurst on last Thursday, January 10, 1876, removed the tumor with the whole gland as a precautionary measure.

This case seems to me of interest clinically, and still more pathologically. Clinically, because it presented nothing by which it could be distinguished from a solid growth, and also because it might so readily have been mistaken for a scirrhus-nodule not yet adherent to the surrounding parts. The chief diagnostic points against any such view were the history both of this and the previous growth in the other breast, the absence of the extreme stony hardness of scirrhus, and the previous menstrual troubles. Of course, the absence of retraction of the nipple, dimpling of the skin, and involvement of the axillary glands could be of little value, since if the growth really were of only three weeks' standing all these might have been absent, and yet scirrhus present. The probabilities are that it had existed for a much longer time, as such growths are generally very chronic in their course, although occasionally very rapidly enlarging. Pathologically this growth seems to give us the key for the explanation of the varied and strange appearances presented by the so-called "chronic mammary tumor" of Sir Astley Cooper, or cystic adenoma, as more ordinarily described.

Let me here briefly advert to the varieties of benign cystic growths having for their seat the mammary gland.

First, there will be frequently found numerous cysts either on the surface, beneath, or in the substance of the mammary gland, which, although presenting many varied appearances, are really of identical origin; they are due to disease of the ducts. In their simplest form they are usually found scattered over the posterior surface of the gland, and, although rarely amounting to anything like an important disease, their occurrence indicates a certain morbid condition. As they may be regarded as typical of this class of mammary cysts, their description will answer for all the other larger and more complicated ones. These cysts vary much in size, are generally small, however, and have for contents fluids of a mucous nature, varying in color from a light yellow to black or a dirty green. Under the microscope these present a granular basis, fat-globules, milk-globules, and colostrum corpuscles with epithelium. They are constantly lined with a coherent epithelium formed of oval, slightly granular, nucleated cells. I would here refer to the admirable essay of Mr. Birkett on "Diseases of the Breast," from which I have drawn many of the facts offered for your consideration this evening.

These cyst-contents would seem to clearly prove their origin, since they contain all the results of the secretion from the true gland. Another proof which Mr. Birkett considers as conclusive, is the fact that we not uncommonly find in the breasts of middle-aged women the ducts dilated and filled with this same greenish mucous fluid, which, in like manner, presents structures identical with those found in the cysts. The mode of formation of these cysts as well as of the larger ones can be explained in a few words. An obstruction occurs at some point of one of the lactiferous ducts. Secretion still going on behind the obstruction, the duct-walls soon dilate, causing detached enlargements or a varicose condition.

In time the portions of duct between the enlargements contract, until finally all trace of it becomes obliterated, and smaller or larger cysts are found surrounded by condensed cellular tissue. At this latter stage the cyst-contents have generally become more

solid; but, whatever the condition of cyst or contents, more or less distinct traces of the ducts may be obtained on section.

There is another disease that might be taken for these cysts, but it is rather *cystiform* than *cystic*, since in the latter we have a closed cavity lined by a continuous membrane, while in the former a communication with the ducts opening on the nipple can always be demonstrated. This affection seems to be due to a varicose condition of the ducts, caused by malformation of the nipple, or their obstruction by pressure. In addition to the substances found in the true cyst, there is seen a firm coherent mass, which may be removed entire, after maceration, presenting a complete cast of the dilated duct and its ramifications. This mass consists of fat-globules, epithelial scales, and some spindle-shaped bodies.

The mode of formation of this pseudo-tissue and the cyst-like bodies would seem to be as follows. First, an excess of secretion takes place in the duct, which cannot flow away spontaneously, owing to the malformed nipple or from pressure on the ducts. The fluid parts becoming absorbed, the more solid portions remain, leaving a more or less hard mass. From mechanical pressure this sets up irritation, followed by cell-proliferation, which sooner or later attains a certain degree of fibrillation. One of the most important facts relating to this cystiform affection is that they are not uncommonly found in portions of gland-tissue removed with a nodule of scirrhus or medullary carcinoma, and that therefore we should be on our guard not to consider the growth innocent until we have carefully examined whether there may not be some small isolated portion of a malignant nature.

The last class of benign mammary cysts now remains to be considered. These are due not to a diseased duct, but to a peculiar action of the fibro-cellular envelope of the gland-tissue, the consequence of morbid nutrition. Owing to this we have fluid effused into the cellular tissue which sooner or later assumes a cystic character by its accumulation at one spot, and by the condensation of areolar tissue around forming a cyst-wall. The cells of the epithelium lining these cysts are hexagonal and nucleated. They are characteristic of this form, and isolate it from all other mammary cysts. These cysts may remain without other than fluid contents, but, as a rule, from the side towards the gland a solid mass will be observed, which in time tends to fill up the whole of the cavity. When this point has been reached, the growth still continuing, the limiting wall gives way, new cysts are formed, until we may have a very large mass, which has been called by various authors "chronic mammary tumor," "sero-cystic sarcoma," etc. I think that you will agree with me that my specimen falls within this latter division. Now as to the microscopic appearances. According to Rindfleisch, "with the total emancipation from the physiological purpose of the glandular formation, the sphere of those tumors begins which I call adenomas." This is shown by several of their microscopic appearances. Apart from the stroma an adenoma consists of epithelial cells arranged concentrically, as if around a lumen. As a rule, this lumen exists only at spots, or, occluded by a mucous or colloid mass, does not communicate with the excretory ducts of the gland. It seems as if nature's effort was merely to produce the greatest possible amount of something resembling glandular tissue, but neglects the vascular supply, so that the larger the growth becomes, the less, relatively, is the supply of blood, the excessive growth thus causing its own death. The mode of growth of an adenoma is *central*, not *peripheral*, so that it displaces more than it infiltrates. The first microscopic change to be noted is a proliferation of the epithelial elements of the acinus. This differs from that taking place physiologically during lactation, in that the cells are piled up one above another, and that a regular fatty metamorphosis does not occur. The proliferation of the cells commences close to the connective-tissue limits, which crowd in among the bases of the older cells until finally the lumen is filled up, when a steadily increasing dilatation of the whole acinus takes place. The remainder of the gland is apt to become atrophic. After the complete filling of the acini by cell proliferation, the adjacent cell-nests coalesce more and more, fatty degeneration occurs at the centre of the large, and finally so-called atheroma-cysts are formed. This is all that concerns us microscopically.

As Rindfleisch, Billroth, and Von Bunn remark, all these appearances should cause this growth to be classed among the epitheliomata, only differing (so far as our present knowledge goes) from cancroids by respecting to a greater extent the connective-tissue limits. We have the same return to the fœtal state of solid masses of cells which precedes the formation of the central lumen of glands. In the growth itself, even the limits between epithelium and connective tissue are not respected, since the neighboring acini coalesce by destruction of their connective-tissue capsules. It remains for further investigators to prove whether the growth as a whole may not break through its capsule and so infiltrate the surrounding parts.

Indeed, Billroth and Von Bunn have termed the adenoma mammæ "true epithelial glandular carcinoma;" and Rindfleisch seems inclined to agree with them. I would, in conclusion, say that Rindfleisch considers a true adenoma mammæ very rare, and that Billroth seems to think that almost invariably they are really adeno-sarcomas. If by an adeno-sarcoma he means an adeno-fibroma (for Rindfleisch considers the fibromas as really fibrous sarcomas), I can understand it. Other-

wise there is nothing in the present specimen to confirm this view. The contents of the cyst resembled thin curdled milk, but under the microscope presented numbers of more or less fatty, degenerated, oval, nucleated cells, few oil-globules, and no milk-globules.

Dr. JOHN ASHHURST, Jr., spoke of the comparative rarity of this form of mammary tumor, and referred to a specimen which had been exhibited to the Society a number of years ago, but no account of which was to be found in the published proceedings. The specimen in question exhibited an earlier stage of the pathological process concerned in the formation of these tumors, being an example of the "sero-cystic sarcoma" of Sir Benjamin Brodie, a tumor which had been better classified by Sir James Paget as a "glandular proliferous cyst." It was removed from a middle-aged woman who had been for a short time a patient in the Episcopal Hospital, where Dr. A. had had the opportunity of studying her case, but who had at that time declined an operation, and had subsequently entered the Pennsylvania Hospital, where her breast was removed by Dr. William Hunt, the specimen being exhibited to the Pathological Society by one of the resident physicians, whose name Dr. A. could not now recall. In that case the cysts were quite large, some being so near the surface of the body as to give the part a characteristically semi-translucent, bluish-black appearance, and there was a free discharge of cystic fluid from the nipple. In the specimen shown to-night, the intra-cystic growths were so far advanced as to render the tumors an example of the "chronic mammary tumor" of Sir Astley Cooper, or, as Mr. Birkett (to whom was in great degree due our knowledge of the pathological relationship existing between these varieties of tumor) had more accurately proposed to call it, an adenocele or adenoma.

These growths, Dr. A. added, were entirely innocent, though in both their earlier and their later stages they had often been mistaken for malignant tumors; and, indeed, when so far advanced that the intra-cystic growths, having burst the cyst-walls and caused ulceration of the skin, protruded as fungous masses, it might be impossible to make the diagnosis without the aid of the microscope. No doubt many cases in which it had been claimed that a return of cancer after operation had been prevented by internal treatment, were really cases not of cancer but of ulcerated adenoma.

Dr. PEPPER said he recalled the case very distinctly, and thought perhaps he could supply the history Dr. Ashhurst desired from notes he had preserved, he having been much interested in the case at the time. He recalled the slightly sanguineous discharge upon which the diagnosis was made, as well as the remarks which Dr. Ashhurst made at the time of its exhibition.

Circumscribed empyema; lesions of aortic and mitral valves; granular kidneys. By Dr. J. C. WILSON.

The specimens presented were removed from the body of a man who died in the wards of the Philadelphia Hospital. There is no record of the clinical history.

J. G. S., æt. 49; white; native of Maine.

Autopsy, thirty hours after death.—Rigor mortis well marked; great emaciation; no œdema.

Lungs free at apices; right lower lobe adherent to diaphragm at base. Its outer and lower surface was separated from the parietal tissue by an irregular space, which contained about two fluidounces of thickish, yellow, inodorous fluid. The walls of this cavity were dense, firm, and extensively calcareous; on their inner surface rough and irregular, by the outer adherent on the one hand to the walls of the chest, on the other to the surface of the lung. No communication existed between the cavity and any bronchus. The boundaries of this cavity were constituted by the firm inflammatory coalescence of the pulmonary and costal pleural surfaces. The lower portions of this lung were but slightly crepitant; they were firm and dense, showing increased connective tissue, large bronchial tubes and blood-vessels. Its apex was consolidated, and the seat of caseous deposit; there was no cavity. The left lung was healthy, save at some few points of impaction near the apex. There were no pleuritic adhesions and no effusion on the left side.

The *heart* was firmly contracted; pulmonary and tricuspid valves normal; edges of mitral leaflets thickened; aortic valves rigid, with atheromatous patches projecting into the sinuses of Valsalva. Two of the leaflets were united in such a way as to present on their ventricular aspect an unbroken surface, and in the aortic aspect an imperfect, irregular, atheromatous septum formed by their united edges.

The *liver* was contracted; it weighed two pounds and thirteen ounces.

Spleen very small.

Kidneys smaller than normal, and granular.

Dr. PEPPER said it was to be regretted that the peculiar circumstances rendered a closer clinical examination impossible. Such a condition as this he thought not common, and he thought the physical signs by which it is to be distinguished from solid intra-thoracic growths are not well determined. He had recently had the opportunity of studying a case of circumscribed empyema of the left side, with a cavity not much larger than this. According to the history furnished by the very intelligent physician who had charge of the case, it appeared to commence as a diaphragmatic pleurisy with no physical signs; gradually there developed an area of dulness in the left back, below the angle of the left scapula, and when Dr. P. saw him there was not absolute

flatness, but flatness on superficial percussion, while on forcible percussion there was slight resonance, especially during inspiration. On auscultation there was distant transmitted blowing breathing over this region. Vocal fremitus was impaired, more so than vocal resonance. Alterations in the position of the patient's body made no difference in the dulness. There was a good deal of hard paroxysmal cough without expectoration. There was radiating pain down towards the abdomen along the lower intercostal nerves. There was great irritability of the stomach, and it was difficult to nourish the patient. There had been sweating for but one or two nights; his temperature was 101½°, and pulse 96.

The gradual appearance of the physical signs, the progressive exhaustion and emaciation of the patient, created the suspicion that there was a solid malignant growth in connection with the growth of the left lung, though after a careful study of the physical signs a diagnosis of circumscribed empyema was established. An exploratory puncture to the depth of one and a half inches was accordingly made without any escape of fluid; a second puncture was followed by the discharge of half a pint of fetid pus. What added to the difficulty of the case was that at this time there was extensive subcrepitant râle over the base of the right side posteriorly, a symmetrical lesion which seemed to favor the supposition that the disease might be of a constitutional character, either tuberculous or cancerous. It proved to be only collateral œdema, which after forty-eight hours subsided, and the right lung became entirely normal. Improvement continued, and about a week after the first operation, just before it was intended to tap a second time and introduce a drainage-tube, the abscess opened into the left bronchus, since which the patient has been making a satisfactory recovery. Once since then, when the discharge of pus was interfered with by some temporary cause, the right lung again became seriously implicated, with impaired motion, feeble respiration, and subcrepitant râles, and there again rose the suspicion that there might be an outburst of tuberculosis; but with the return of the discharge all these symptoms disappeared.

Pachymeningitis; hæmorrhagica chronica. By Dr. J. C. WILSON.

The brain and its membranes exhibited. They were removed from the body of a German, aged 58 years, who died in the Philadelphia Hospital. Death occurred shortly after admission. The following facts were elicited from the attendants. His left pupil was contracted, his gait staggering and straddling, with a tendency to reel towards the left; the head was carried forward, the arms out from the body; mental processes feeble; appetite voracious. He ran to the table and ate rapidly and greedily, like an animal. Speech not affected. No pain in the head was complained of, but he spoke of pains in his back. He crawled about the ward at night on his hands and knees, prowling about the beds. There were neither convulsions nor vomiting. Tremor was not observed. Coma supervened, and death soon followed.

On opening the skull, the dura mater was found to be externally normal in appearance. A considerable quantity of serous fluid escaped on opening this membrane. Beneath it, overlying the whole upper surface of the cerebral hemispheres, there was found symmetrically disposed in the two sides a thick oblong layer of organized effusion, firm, with smooth rounded edges. This layer was slightly adherent to the dura mater; more firmly so on the right side, and especially near the median line. It simply rested upon the arachnoid, to which it was not adherent. Its thickness was uniform on the right side, measuring about two to three lines, but on the left side it gradually increased from behind forward, reaching near the anterior border, where it covered the anterior lobes, a thickness of one-half inch. In this region there was a small cyst filled with turbid brownish fluid. This membranous new growth was translucent in its thinnest parts, of a yellowish-brown color when fresh, and deeply pigmented at points, presenting a mottled appearance.

The visceral arachnoid was slightly opaque; the vessels of the pia mater were deeply injected. The weight of the brain, together with these masses, was forty-nine ounces.

Liver small. Kidneys contracted.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Reported by FRANK WOODBURY, M.D.

THE PRESIDENT, DR. DRYSDALE, in the chair.

PROCEEDINGS of a conversational meeting, held January 26, 1876.

Dr. A. DOUGLASS HALL read a paper upon "The Ophthalmoscope in Cerebral Tumors," published in full on page 387.

The thanks of the Society were, on motion, returned.

Dr. KEYSER, in connection with the existence of choked disk and its signification, spoke of the existence of cases of retrobulbar tumors of the optic nerve in which the disk is swollen, and has the appearance of approaching optic neuritis, that might mislead a superficial observer. He referred to a specimen he exhibited before this Society last April (1875) of myxoma or rather fibro-myxomatous tumor of the optic nerve, which he had on the first of that month removed, with the eye, from a little girl of eight years of age, and in which, at the first stage, before there was any marked exophthalmos, the disk was swollen, and it was supposed to be a case of optic neuritis. He had now to report

a similar case occurring in a little girl of three years of age, and presented the tumor, which he had removed only two days previous to this meeting. In this case the disk was very much swollen, rising abruptly above the surrounding retina. The tumor was one and a half inches long and three-quarters of an inch in diameter, and almost pushed the eyeball out of the socket. It had grown in about ten months, without pain, inflammation, or any inconvenience to the child. Vision was entirely lost. Such tumors of the optic nerve are extremely rare, and he had only been able to find nine or ten cases reported, all told. They are rather soft, often fluctuating like a cyst. They contain mucous or gelatinous deposits in cavities in a filamentary basis resembling connective tissue. This filamentary basis generally arises from the inner sheath around the optic nerve, the fibres of which pass into the trunk of the nerve, separating its fibres, and in the interstices of which these cavities are formed. This mucous tissue is represented by the vitreous, the jelly of the umbilical cord, and the neuroglia of the nervous system. As these cases were extremely rare and interesting, he asked Dr. J. G. Richardson to state the pathological character of a myxoma.

Dr. RICHARDSON observed that very little remained to be said in addition to Dr. Keyser's definition, which was perfectly correct. A myxoma is a rare tumor, and extremely rare in the location mentioned. In its structure it is soft and gelatinous, having its analogue in the jelly of Wharton of the umbilical cord.

Dr. WINSLOW stated that in his experience cerebral diseases could generally be recognized by the other symptoms, but some cases are obscure, and require aid in diagnosis. No physician should undertake to treat cerebral disease without knowing how to use the ophthalmoscope. There may be an ascending optic neuritis commencing in the eye itself with peculiar appearances, owing to constriction by the sclerotic ring. In descending neuritis the course of the affection is slower, and the papilla is creamy white. The blue atrophy and the white atrophy both proceed from slow optic neuritis, not necessarily connected with cerebral disease. Von Graefe, who first called attention to the diagnosis of brain-diseases by the ophthalmoscope, was of the opinion that all cases of brain-disease would show choked disk. This has been questioned, but it has been ascertained that ninety-five per cent. of such cases are attended with changes in the optic disk.

Dr. HALL said that he did not regard choked disk or neuritis as always indicating pressure, inclining to Dr. Loring's view that the choking was due to a mixed cause, inflammation of and exudation from the dural sheath of the nerve, and neural change of a paralytic nature. One-sided choked disk may occur without pressure, and is not always caused by brain-disease. But in the experience of high authorities double optic neuritis is, as a rule, the sign of central disturbance. Drs. Reich and Annuske have found that in eighty-eight cases of cerebral tumor there was double optic neuritis in eighty-two. The latter even goes so far as to say that "optic neuritis is an almost invariably constant symptom in connection with cerebral tumors."

Choked disk occurs when there is trouble at the base of the brain or effusion into the ventricles, and acts by affecting the nutrition, not by the effusion travelling along the sheath of the nerve; this would be impossible; this was Von Graefe's view, but it will have to be discarded. Experiments of Schwalbe and Schmidt show that fluid cannot be forced from the subarachnoid space along the sheath of the nerve, owing to existence of septa that would prevent its passage.

He quoted the case of a young man who was rendered totally blind by being thrown violently from a wagon. When seen some weeks after, nothing abnormal was to be seen in the eyes, except some slight bleaching of the nerve. This occurred ten years ago, and was then considered as due to shock or concussion of the retina. But he was now disposed to look upon it as a case of optic neuritis that had passed away leaving slight traces behind it. Such cases do occur in general practice, and he would recommend ophthalmoscopic examination by routine in all cases of nervous disease with head-symptoms.

REVIEWS AND BOOK NOTICES.

MEDICAL RESPONSIBILITY IN THE CHOICE OF ANÆSTHETICS. By H. MACNAUGHTON JONES, M.D.

Dr. Jones is one of the leading practitioners and hospital surgeons of Cork, Ireland, and appears to have been impelled to the writing of this pamphlet by a death from chloroform which recently occurred in that city. The brochure is an earnest plea for the use of ether instead of chloroform, and ought to be carefully read by those American surgeons who still prefer to save a minimum amount of time and trouble at the risk of the patient's life.

A MANUAL OF THE DISEASES OF THE EYE. By C. MACNAMARA, F.C.U. Third Edition. Philadelphia, Lindsay & Blakiston, 1876.

This treatise of Mr. Macnamara is well known as an excellent manual, which, whilst it does not equal in minuteness of detail and in thoroughness the larger works of Soelberg Wells and others, contains sufficient for the student's *vade-mecum* and even to serve the general practitioner for his single book on ophthalmology. The present edition, revised and brought up to the times, is in its general character like its predecessors.

GLEANINGS FROM EXCHANGES.

THE GURJUN OIL TREATMENT OF LEPROSY (From *Indian Medical Gazette*, March, 1876).—Dr. Lachman Doss, Sen., who has charge of a leper asylum, gives the following results which he obtained by treating twenty-five male lepers during eight months with an emulsion of equal parts of gurjun oil and lime-water, given in half-ounce doses twice a day. One part of the oil and three parts of lime-water were churned together until a mass like butter was formed, which was applied by thorough inunction for two hours daily. The effects of this treatment do not exactly coincide with those described by Dr. Dougall, but still do not differ widely from them in the most prominent points. Under its use the ulcers have healed and become covered by cicatricial tissue; the thickness of the skin is to a certain extent reduced; swelling of the skin considerably gone down; tubercular elevations nearly all subsided; sensation has partially returned, particularly to the upper extremities; the itching sensation of the skin and general irritability of the body have almost entirely abated; patches of discoloration greatly faded away, the change taking place from the circumference to the centre, and assumed a level with the surrounding skin, but they still look lighter in color and are insensible to touch. From what has been mentioned above it may easily be inferred that the result goes to prove the value of the oil as a remedy in leprosy, especially, it would seem, when the treatment is commenced soon after the first manifestation of the disease; but there are as yet no satisfactory data to show that this drug is a specific for this malady. Of the twenty-five cases selected for this experiment twenty are still in the hospital, four having died during treatment, while one absconded.

SCHOOL-ROOM POISONING IN NEW YORK.—*The Sanitarian* of April contains the report of a committee appointed under a resolution of the New York Medico-Legal Society, to confer with school authorities on this subject, with a view to possible legislation. In their report they agree with a committee of the Board of Education, in which the minimum amounts of surface and of space for each pupil vary from five square feet to seventy cubic feet in the lower schools, up to nine square feet and one hundred cubic feet in the more advanced departments. It was also found that the principals had admitted more pupils into many of the schools than their size would warrant, being induced thereto both by the importunity of parents and others charged with the care of children, and also by the desire to have a more numerous attendance at their schools. The committee of the Medico-Legal Society think that while the school-room space suggested above is confessedly greater, that which now is and has hitherto been allowed in the public schools of New York is not consistent with physiological law, nor with the opinions of those whose scientific judgment on these points is of weight. Primary School No. 1, on Ludlow Street, which is one of the newest and best arranged and appointed, is tainted throughout the halls, and at times in the class-rooms, with the odors arising from the latrines in the basement, which are emptied only "once or twice a week." The seating capacity of this building is given as 1700; attendance of pupils, 1329; square feet in twelve rooms, 3264; cubic feet in the several class-rooms varying from thirty-three to forty-one for each child, and on the day the inspection was made fifty children were absent on account of illness. The minimum age of admission should be fixed at six, or, still better, at eight years, and three hours should be the maximum period of attendance in the primary departments and schools. Accepting something over eight hundred cubic feet as the lowest standard of allowance of air, in conjunction with the best means of ventilation for twenty-four hours, and adapting this to schools, it would appear that for a daily session of five hours each pupil should have one hundred and fifty cubic feet of space, as that much is needed for the preservation of atmospheric purity without the creation of dangerous draughts.

A CASE OF SUCCESSFUL SKIN-GRAFTING AFTER AMPUTATION (*The Lancet*, February 5, 1876).—Dr. William H. Lloyd reports a case of amputation of the left leg, in consequence of a compound comminuted fracture followed by gangrene. The operation was performed by the circular method, in the absence of sound material for flaps, and as near the knee-joint as possible. Twenty days afterwards the condition of the part was as follows:

The face of the stump was almost uncovered by skin; the end of the tibia was prominent, and seemed about to protrude through the soft parts, the whole circumference of the sharp-cut edge being clearly defined in a weakly granulating and sloughing surface; the anterior portion of the cut edge of the bone was uncovered to the extent of an inch in length, and the end of the fibula was exposed. The surrounding skin appeared dragged away from the wound, and that over the front of the tibia, all round its tubercle, was livid, soft, and shining, and pitted by some small abrasions, which seemed likely to increase in size.

Six small skin-grafts were inserted in the most promising spots among the granulations, and lightly covered with lint wet with carbolic acid solution (one to forty). The limb was placed on a pillow, a few turns of a bandage being very lightly applied. Four of the first six grafts adhered, and a few fresh ones were inserted every alternate day. It was wonderful to see how quickly the influence of the fresh material was felt. Nine days after the first grafting, the tibia was much less prominent, and the skin round the

stump less dragged, and apparently rising to meet the new growths. The grafts were taken from the front of the thighs. Pieces of skin of the circumference of a grain of hempseed were pinched up with a fine forceps, and snipped off as thinly as possible with a pair of scissors,—blood never being drawn. They were placed on any spot in which the action seemed healthy enough to give a chance for their development, and perhaps a hundred may have been employed during the treatment, of which, of course, a large number were unsuccessful. In from forty-eight hours to three days the blue shade round the edges of the grafts, which showed their success, might generally be observed. This treatment was persisted in for six weeks, by which time the stump was nearly healed, the exposed portion of the tibia was separating, and a quarter of an inch of the end of the fibula had exfoliated. The final result was a good, healthy, solid stump.

CARBOLIZED CATGUT AS A LIGATURE (*The Lancet*, February 19, 1876).—Dr. A. W. Nankivell gives a list of many amputations and other major operations performed at St. Bartholomew's Hospital and in which carbolized catgut was used as a ligature, and as a consequence of his observations upon these cases claims for it the following advantages: (1) immediate closure of the deeper parts of a wound; (2) absence of sinuous tracts; (3) diminution of subsequent bleeding, or rather its entire absence in consequence of the free use of ligatures to bleeding points during the operation; (4) absence of danger from accidental traction on a ligature; (5) above all, the almost entire avoidance of risk from secondary hemorrhage.

IT is reported that the plague is on the increase in Bagdad. Nine or ten deaths from plague occur daily in that city.

NOTES AND QUERIES.

AT the last meeting of the Board of Trustees of the University of Pennsylvania, Dr. Joseph Carson resigned the chair of Materia Medica and Therapeutics and was elected Emeritus Professor.

TO THE EDITOR:

DEAR SIR,—I feel that I am bound, as Chairman of the College Committee on the Vivisection Bill, to correct one or two errors into which Mrs. White has fallen in her letter of April 3. My statement shall be brief.

The Committee accepted as correct the explanation made to them by Mr. Jones that the bill was meant only to check the use of animals for *class* demonstration, and they therefore promised cordially to support it if the terms were made less ambiguous. To propose as it did to punish the maiming, etc., of animals for the illustration or demonstration of facts, processes, or theories already known to science, was so vague as to admit of being made by over-zealous people a means of attacking all scientific use of animals. A man may wish to demonstrate afresh to himself, for quite legitimate purposes in science, facts or processes already known. The terms "illustrate" and "demonstrate" do not necessarily imply the presence of a class. For this reason we asked to have the words "before a class" added. We were simply told in reply that those who framed the bill would accept no amendments, whereupon we felt bound to defeat the measure. I may add that the Committee stated over and over to Mr. Jones their wish to support the bill if it could be made clear, and their desire to co-operate with its friends to carry some larger measure for the general regulation of the scientific use of animals. No reasons were given us for the refusal of our amendment. Mrs. White now volunteers two reasons for its rejection. First, because the bill was a "moderate bill." Whether it was so or not depends upon how far its terms could be stretched so as to include other demonstrations than those before a class. It could be easily made to apply more largely, and the will so to apply it would not, we fear, have been lacking, no matter how perfect may have been the good faith of its original framers. The second objection was that its whole purpose might be defeated by any such amendment, because physicians might easily evade it by operating before one or two students, and maintaining that they did not constitute a class. Here at last the secret is out, and we see that this bill, which was represented to us as meant to stop class demonstrations, was really designed to stop all demonstrations, since, as we are now allowed to see, one or two students were to be looked upon as a class. This, then, was to be the result, and this the machinery to be set in motion. A physician would wish to learn the value of a new drug; in so doing he would find it needful to learn if with cut pneumogastric nerves or under artificial respiration certain effects are to be seen, but these involve demonstrations to himself and to his one or two assistants of facts already known, upon which he may be taken before an alderman and subjected to penalties, the alderman apparently to be the judge of the novelty of the scientific facts involved. It is a little hard to deal gently with folly such as this,—folly which, but for a vigorous remonstrance from the profession, would have acquired legal capacity for untold mischief.

In conclusion, I think that I am authorized to state that at any time the College of Physicians will cordially unite with these very earnest women in any bill to check class demonstrations on animals where no ether is used, if only a clear bill can be framed. Let them ask the College to appoint a committee to meet them for this purpose, and they will find us prompt and willing to help so good an object.

S. WEIR MITCHELL, M.D.,
Chairman of Committee.

TO THE MEDICAL PROFESSION.

Being interested in the frequency of disease of the heart in glass-blowers and players on wind-instruments, I would be very thankful for any information sent me on this subject.

ISAAC OTT.

EASTON, PA.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 23, 1876, TO MAY 6, 1876, INCLUSIVE.

EDWARDS, L. A., SURGEON.—Leave of absence extended six months on surgeon's certificate of disability. S. O. 84, A. G. O., April 28, 1876.

MAGRUDER, D. L., SURGEON AND MEDICAL DIRECTOR.—Granted leave of absence for one month. S. O. 49, Department of Arizona, April 17, 1876.

ALEXANDER, R., SURGEON.—In addition to his present duties as Post-Surgeon, Fort Vancouver, assigned to duty as Acting Medical Director and Attending Surgeon at these Headquarters. S. O. 43, Department of the Columbia, April 8, 1876.

WOODHULL, A. A., ASSISTANT-SURGEON.—Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 12, Department of the South, May 2, 1876.

LIPPINCOTT, H., ASSISTANT-SURGEON.—In addition to his other duties, to assume charge of the Medical Director's office during absence of Surgeon Magruder. S. O. 49, c. s., Department of Arizona.

KING, WM. H. H., ASSISTANT-SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability, with permission to leave the Department of the South. S. O. 79, A. G. O., April 20, 1876.

CRAMPTON, L. W., ASSISTANT-SURGEON.—Assigned to duty at Vicksburg, Miss. S. O. 77, Department of the Gulf, April 20, 1876.

TAYLOR, M. E., ASSISTANT-SURGEON.—Assigned to duty at Baton Rouge, La. S. O. 84, Department of the Gulf, May 1, 1876.

PETERS, D. C., SURGEON (Retired).—Died at Brooklyn, N. Y., April 22, 1876.